

## Claims

1. An intake system for the combustion air of a motor of a hand held implement, comprising:

5 an air filter having a dirt chamber and a clean chamber that is separated from the dirt chamber by a filter medium, wherein said clean chamber is fluidically connected with a carburetor of said motor;

10 a centrifugal separator that splits an incoming air stream into core flows having a low particle density, and peripheral flows having a high particle density, wherein one of said flows is conveyed to said dirt chamber of said air filter, and the other of said flows is discharged, wherein said centrifugal separator includes at least two cyclones, and wherein discharge flows from said cyclones are respectively combined in pairs; and

15 a common suction tube, wherein said paired discharge flows open out into said suction tube.

2. An intake system according to claim 1, which includes a dirt collector in which is formed a dirt collection chamber into which said discharge flows open out.

20 3. An intake system according to claim 2, wherein passages are formed in said dirt collection chamber and in which said discharge flows are combined, and wherein at least one partition is disposed between two of said passages.

25 4. An intake system according to claim 3, wherein said cyclones are provided with discharge spirals, wherein one of said discharge flows is withdrawn from one of said cyclones via a pertaining one of said discharge spirals, and wherein a cross section and length of said passages are such that approximately

the same underpressure exists in said discharge spirals of all of said cyclones.

5. An intake system according to claim 4, wherein said discharge spirals of said cyclones are monolithically formed with said dirt collector.

5 6. An intake system according to claim 2, wherein said dirt collection chamber is fluidically connected with said peripheral flows that are flowing from said cyclones.

10 7. An intake system according to claim 2, wherein at least one of said cyclones has a main body and an immersion tube, wherein said immersion tube is formed on an end of said main body that faces away from an intake element, and wherein at least one of said core flows flows out of said at least one cyclone via said immersion tube.

8. An intake system according to claim 7, wherein all of said cyclones are provided with immersion tubes, which are monolithically formed with said dirt collector.

15 9. An intake system according to claim 2, wherein said dirt collection chamber extends essentially perpendicular to longitudinal axes of said cyclones.

10. An intake system according to claim 1, wherein each of said cyclones is provided with a main body on which is disposed an intake element.

20 11. An intake system according to claim 10, wherein said intake elements are embodied as separate components, and are provided with an inlet funnel.

12. An intake system according to claim 10, wherein said intake elements for all of said cyclones have an identical design.

25 13. An intake system according to claim 10, wherein said air filter is disposed in an air filter housing, wherein said main bodies of said cyclones form a common component with a first housing part of said air filter housing, and

wherein said first housing part includes said dirt chamber of said air filter.

14. An intake system according to claim 2, which includes a fan, wherein said suction tube fluidically connects said dirt collection chamber with a bladed, rear face of said fan that faces said motor, wherein a cross-section of said suction tube is preferably enlarged in a direction toward said fan, and wherein said suction tube opens out at said fan, approximately in a region of an axis of rotation thereof, such that in a normal operating position of the implement, said suction tube approximately coincides with a direction of gravitational force.

15. An intake system according to claim 2, wherein in a normal operating position of the implement, said dirt collection chamber, when viewed in a direction of gravitational force, is disposed above said air filter.

16. An intake system according to claim 2, wherein said dirt collector is disposed on a housing part of an air filter housing.

17. An intake system according to claim 1, wherein said dirt chamber of said air filter is closed off relative to the environment via an air filter cover that at least partially spans said cyclones.

18. An intake system according to claim 1, wherein said cyclones are tangential cyclones.

19. An intake system according to claim 1, wherein each of said cyclones has a main body having an approximately cylindrical, and in particular slightly conical, configuration, and wherein longitudinal axes of said cyclones extend parallel to one another and form a common plane.

20. An intake system according to claim 10, wherein relative to a direction of gravitational force, said intake elements draw in combustion air from above said carburetor of said motor.